increasing agent needed to produce a concentrated residue having a predetermined or desired flash point temperature can vary, depending upon the solvent. As a result, distillation within the still 40 can be conducted at higher temperatures, if desired, to increase solvent recovery. Although the flash-point- increasing agent does not prevent the acrylic elastomer particles of the concentrated residue from coalescing into a molten state, the agent lubricates the coalesce particles and prevents the particles from bonding and caking onto the still interior 41. Further, the agent acts as a carrier oil and temporarily maintains the coalesced particles in suspension, which allow more solvent to be removed from the still 40. Studies have shown that use of the agent have increased solvent recovery from approximately 97% to approximately 99% by volume of the solvent contained within the waste photopolymer fluid, while the concentrated residue maintains fluidity at elevated temperatures. However, once the concentrated residue cools, the residue becomes a solid, plastic mass. The concentrated residue is maintainable as a Class III liquid by reducing solvent recovery.

In the embodiment shown in Figure 6, the flash-point-increasing agent is supplied from an agent container 96 operably connected to the still interior 41 through an agent conduit 97 connected in fluid communication to an agent port 98 on the still 40. An actuatable agent control valve 99 controls the amount of flash-point-increasing agent delivered to the still 40. Another want 86 is utilized to operably connect the agent control valve 99 to the agent container 96. In another embodiment, shown in Figure 7, the agent conduit 97 is operably connected in fluid communication with the waste fluid feed conduit 76, supplying the flash-point-increasing agent to the still 40. Yet, in the embodiment shown in Figure 8, the agent conduit 97 is operably

At the conclusion of the predetermined amount of time for the final cycle, the control logic of the device 30 controls the electric heaters 657 to terminate heating the oil contained in the oil filled jacket 66 surrounding the still 40. At this point in the operation of the device 30, a control command generated at the controller 101 by the control logic of the device 30 signals the actuatable dump valve 63 to open, permitting the concentrated residue, a Class III residue, to drain in a molten state from the still interior 41 into the residue container 64 disposed within the drum cavity 103. Upon cooling, the concentrated residue, with the flash-point-increasing agent, becomes solid.

The solvent distilled from the waste photopolymer fluid and stored in the solvent section 72 of the tank 70 is drawn through the solvent feed conduit 24 out of the solvent section 72 by the solvent pump 78 back to the plate processor 22 in response to a signal supplied to the controller 101.

When the residue container 64 is filled with concentrated residue and flash-point-increasing agent drained from the still interior 41, a signal is sent to the controller 101 by the ultrasonic sensor 111, preventing the dump valve 63 from opening until the operator empties or replaces the filled residue container 64. The contents of the filled residue container 64 are transportable and disposable as a Class III residue. Upon emptying and returning the residue container 64 to the drum cavity 103, the device 30 is enabled to operate in the above described manner.

Now, referring to Figures 11-14, the general arrangement of another embodiment of the device 30 made in accordance with the present invention is shown. In addition to the still 40, the heating assembly 65, the tank 70, the solvent delivery pump 78, the condenser 86, the vacuum pump 90, the flash-point-increasing-agent

open, permitting the concentrated residue, a Class III residue, to drain in a molten state from the still interior 41 into the residue container 64 disposed within the drum cavity 103, wherein the residue solidifies upon cooling.

With respect to the above description then, it is to be realized that the optimum dimensional relationship for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention. Further, the various components of the embodiments of the invention may be interchanged to produce further embodiments of the invention may be interchanged to produce further embodiments and are these further embodiments are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, various modifications may be made of the invention without departing from the scope thereof and it is desired, therefore, that only such limitations shall be placed thereon as are imposed by the prior art and which are set forth in the appended claims.